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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,494	08/20/2001	Stephen Paul Morgan	ARC920010079US1	5917

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EXAMINER

MARTINEZ, DAVID E

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/933,494

Applicant(s)

MORGAN, STEPHEN PAUL

Examiner

David E Martinez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-6, 8, 10, 12-15, 17, 19-21, 23-24, and 26, are rejected under 35

U.S.C. 102(e) as being anticipated by US Patent No. 6,477,624 to Kedem et al.

As per claim 1, Kedem teaches a system, comprising:

a computer [figs 2, 3, element 100] including a central processing unit (CPU) [fig 3, element 302] but not including a local hard disk drive [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64];

an adapter [figs 3, 4, element 202] coupled to the CPU [fig 3, element 302] for receiving local disk I/O requests therefrom, the adapter translating disk I/O requests into network I/O requests [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64, it is inherent the adapter performs translation in order to be able to handle requests from a cpu and to communicate to a remote server through a network]; and

at least one network resource communicating with the adapter for satisfying the local disk I/O requests [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64].

As per claim 10, Kedem teaches a method for facilitating, in a diskless computer, the use of an operating system not modified to not issue local disk I/O requests [col 2, line 65 to col

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3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64, column 10, lines 56-62] comprising:

receiving local disk I/O requests from the operating system [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64]; and

satisfying the local disk I/O requests by accessing a network communicating with the diskless computer, wherein the satisfying act includes translating the local disk I/O requests to network requests at an adapter engaged with the diskless computer, transparently to a CPU in the diskless computer [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64, column 10, lines 56-62].

As per claim 19, Kedem teaches a diskless computer, comprising:

a CPU [fig 3, element 302] running an operating system not modified to not issue local disk I/O requests [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64];

a disk-free adapter [figs 3, 4, element 202] communicating with the operating system and receiving disk I/O requests therefrom, the adapter translating the disk I/O requests to network requests [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64]; and

a network connection through which the disk I/O requests can be satisfied despite the lack of a local hard disk drive in the computer [col 2, line 65 to col 3 line 6, column 3, lines 28-47, and line 62 to column 4 line 3, and lines 24-64, column 14, lines 11-22].

As per claims 2, 12 and 20 Kedem teaches the adapter is plugged into a motherboard holding the CPU [column 6, lines 34-39, pc cards are pluggable into a motherboard].

As per claims 3, 13 and 21, wherein the adapter is connected by a connecting cable to a motherboard holding the CPU [fig 3, element 302(a), column 10, lines 38-46]

As per claims 5, 14, and 23, Kedem teaches the adapter is also a computer network adapter [see claim 1].

With regards to claims 6, 15, and 24, Kedem teaches the system of Claim 1, wherein the adapter is not a conventional computer network adapter, the computer including a conventional network adapter separate from the adapter [fig 4, column 11, lines 55-61, column 14, lines 11-22].

As per claims 8, 17, and 26, Kedem teaches the adapter causes a conventional operating system configured for generating local disk I/O requests to be loaded from a network storage to a volatile memory in the computer [although not explicitly taught, it is inherent the system must have some kind of volatile memory if there is no hard drive for the O/S to run on, col 2, line 65 to col 3, line 6].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 18, and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,477,624 to Kedem et al.

As per claims 9, 18, and 27, although not explicitly taught by Kedem, it is well known in the art, adapter cards are housed within a computer that uses it for their protection of outside elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention to house the adapter card within the computer to protect it from other elements interfering with its function.

Claims 7, 16 and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,477,624 to Kedem et al. as applied to claims 1, 10, and 19, above, and further in view of US Patent No. 5,802,365 to Kathail et al.

As per claims 7, 16 and 25, Kedem fails to teach an adapter to include a sequence of bytes identifying the adapter to the CPU as a secondary boot device. However, Kathail teaches a PCI boot device (an adapter) providing a set of properties such as its identification, to the system in which it is installed within (controlled by a CPU) during boot up for the purpose of recognizing the device so it can be configured and used by the system [column 39, lines 35-55].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of both Kedem and Kathail to have the adapter include a sequence of bytes identifying the adapter to the CPU as a secondary boot device for the purpose of recognizing the device so it can be configured and used by the system to be able to access data from a remote location.

### ***Response to Arguments***

Applicant's arguments filed January 5, 2004, have been fully considered but they are not persuasive.

With respect to claims 1, 10 and 19, Applicant argues:

"disk requests are directly transmitted without the claimed translation " citing col.4 lines 52-62 and col. 9 lines 34-36 on Kedem's invention.

However, Kedem et al does perform translation. The evidence of record cited by the Applicant does not contradict the Examiner. The Abstract, col. 3 lines 42-46, col. 8 lines 28-33, col. 10 lines 56-62, col 11 lines 20-23, figure 4, element 402 inside element 202, disclose the sending of network requests over a communication **network** (e.g. a local area **network** (LAN), a wide area **network** (WAN), and the Internet) transmitted through an Ethernet controller (fig 4,

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element 402) that is inside the LDIM element 202, over a communication **network** to remote storage. LANs, WANs, and the Internet are all **networks** that facilitate communication of data between computers through the use of **network requests**. Kedem teaches the communication between the LDIM element 202 and the RDIM element 204 is done over one of the above disclosed **networks**, thus when the LDIM intercepts "local disk I/O requests" and transmits them over one of the said **networks**, the I/O request has to be translated to a **network request** and must follow the right protocol used for communication to take place.

With respect to claims 9, 18, and 27, Applicant requests Prior Art for well known facts. Kedem teaches the adapter [figure 2, element 202] is housed within a computer [fig 2, element 100, column 8, lines 16, 17, figure 3, element 202 inside element 100].

The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 5, mailed 12/29/03 and repeated in this Office Action herein above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

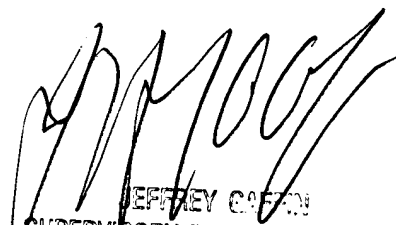
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E Martinez whose telephone number is (703) 305-4890. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEM



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